

NOTE-BOOK

P. Kropotkin

MUTUAL AID

1949

P. Kropotkin
Mutual Aid
A factor of evolution

popular edition
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1919

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邦訳参考書

相互扶助

— 進化の要因 —

室伏高信訳

春秋社：世界大思想全集，34

1928

Competition in Darwin = 競争の力か？

p. 3. This view, however, I could not accept, because I was persuaded that to see in that war a condition of progress, was to admit something which not only had not yet been proved, but also lacked confirmation from direct observation.

p. 52 The idea which permeates Darwin's work is certainly one of real competition going on within each animal group for food, safety, and possibility of leaving an offspring. He often speaks of regions being stocked with animal life to their full capacity, and from that overstocking he infers the necessity of competition. But when we look in his work for real proofs of that competition, we must confess that we do not find them sufficiently convincing. If we refer to the paragraph entitled "Struggle for life most severe between individuals and varieties of the same species", we find in it none of that wealth of proofs and illustrations which we are accustomed to find in whatever Darwin wrote. The struggle

between individuals of the same species is not illustrated under that heading by even one single instance: it is taken as granted.

動物の競争 competition のことについてどういふ？

p. 58 The actual numbers of animals in a given region are determined, not by the highest feeding capacity of the region, but by what it is every year under the most unfavorable conditions.

The numbers of horses and cattle thus always remain beneath what they otherwise might be; all the year round there is food for five or ten times as many animals and yet their population increases extremely slowly. But as soon as the Buriate owner makes ever so small a provision of hay in the steppe, and throws it open during days of glazed frost, or heavier snow-fall, he immediately sees the increase of his herd.

p. 60. Like facts, all tending to reduce the importance given to competition, could be produced in numbers. Of course, it might be replied, in Darwin's words, that nevertheless each organic being, "at some period of its life, during some season of the year, during each generation or at intervals, has to struggle for

life and to suffer great destruction," and that the fittest survive during such periods of hard struggle for life. But if the evolution of animal world were based exclusively, or even chiefly, upon the survival of the fittest during periods of calamities; if natural selection were limited in its action to periods of exceptional drought, or sudden changes of temperature, or inundations, retrogression would be the rule in the animal world.

註. Darwin, struggle for life = 生存斗争
 - overpopulation, 結果, 同種 + separate individual
 food + safety 生存斗争, direct + struggle 生存斗争
 competition 生存斗争

27- Darwin's 'metaphorical' + 生存斗争 生存斗争
 struggle 生存斗争, competition 生存斗争, 生存斗争 'indirect'
 + 生存斗争 生存斗争, 生存斗争 adverse circumstances =
 生存斗争, struggle 生存斗争, 生存斗争, 生存斗争 collective
 + 生存斗争, i.e. all individuals 生存斗争 = 生存斗争 生存斗争 + 生存斗争
 生存斗争 (p. 52 生存斗争).

Kropotkin's 生存斗争 = 生存斗争, 生存斗争 生存斗争, 生存斗争

生存斗争 = 生存斗争, 生存斗争 生存斗争 = 生存斗争 生存斗争 + 生存斗争. 生存斗争 struggle 生存斗争 + 生存斗争
 生存斗争 + overpopulation, 生存斗争 + 生存斗争, 生存斗争 生存斗争 = 生存斗争.
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 生存斗争, p. 17, 生存斗争, 生存斗争 生存斗争 = 生存斗争.

... but even in the Amur and Ussuri regions, where animal life swarms in abundance, facts of real competition and struggle between higher animals of the same species came very seldom under my notice, though I eagerly searched for them.

生存斗争 = 生存斗争 Kropotkin's 生存斗争 = 生存斗争, struggle 生存斗争 + 生存斗争, 生存斗争, 生存斗争
 生存斗争 + 生存斗争, 生存斗争, steppe = 生存斗争, severe + 生存斗争 生存斗争
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 生存斗争 生存斗争, 生存斗争 生存斗争 生存斗争 = 生存斗争 生存斗争.
 生存斗争 best condition = 生存斗争, 生存斗争 overpopulation 生存斗争,
 生存斗争 worst condition = 生存斗争, 生存斗争 overpopulation 生存斗争
 生存斗争, food, scarcity + 生存斗争. 生存斗争 生存斗争 生存斗争 生存斗争
 生存斗争 生存斗争 + 生存斗争? 生存斗争, 生存斗争 = 生存斗争, separate
 individual + 生存斗争, direct competition 生存斗争 生存斗争 生存斗争
 生存斗争.

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selection 8" + 957218 第17 + 441 + 5 + 1, 1921
evolution 1 theory + 17, competition + selection
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+ 1172021 retrogressive + 1172021, 111811111111
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competition = 221 mutual aid

mutual aid = mutual struggle is competition = 221
1111 1111 idea 7 1111, 1111 1880年, Professor Kessler
(Kropotkin = 1111, the well-known zoologist 7 1111 - p.3)
= 1111, Russian Congress of Naturalist (1111 = 1111) 1111
1111 1111 1111 1111, 1111 1111 'On the Law of
Mutual Aid' 1111 1111 1111, 1111 1111.

Kropotkin = 1111 1111 1111, Kessler, 1111 1111 1111.
p. 16.

"I obviously do not deny the struggle for
existence, but I maintain that the progressive
development of the animal kingdom, and
especially of mankind, is favoured much
more by mutual support than by mutual
struggle. --- All organic beings have two
essential needs: that of nutrition, and that
of propagating the species. The former brings
them to a struggle and to mutual extermination,
while the needs of maintaining the species
bring them to approach one another and to
support one another. But I am inclined to

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 = 220 20707 original +, 220 + data 70707, 220, 100'
 10707 mutual aid 220 70707 data 70707 40707 107
 10707, It is a feeling infinitely wider than
 love or personal sympathy — an instinct that
 has been slowly developed among animals and
 men in the course of an extremely long evolution,
 and which has taught animals and men alike
 the force they can borrow from the practice of
 mutual aid and support, and the joys they can
 find in social life. (p.6) x 35 = 9".

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... it is not love and not even sympathy upon which Society is based in mankind. It is the conscience — be it only at the stage of an instinct — of human solidarity. It is the unconscious recognition of the force that is harnessed by each

man from the practice of mutual aid; of the close dependency of every one's happiness upon the happiness of all; and of the sense of justice, or equity, which brings the individual to consider the rights of every other individual as equal to his own. Upon this broad and necessary foundation the still higher moral feelings are developed. But this subject lies outside the scope of the present work, and I shall only indicate here a lecture, 'Justice and Morality', which I delivered in reply to Huxley's 'Ethics', and in which the subject has been treated at some length.

Sociability とは何か意味する

Kropothin, 意味する mutual aid (互助) is sociability
とは何か、また、次の事柄が重要となる。

p. 47. Sociability — that is, the need of the animal of associating with its like — the love of society for society's sake, combined with the 'joy of life', only now begins to receive due attention from the zoologists. We know at the present time that all animals, beginning with the ants, going on to the birds, and ending with the highest mammals, are fond of plays, wrestling, running after each other, trying to capture each other, teasing each other, and so on. And while many plays are, so to speak, a school for the proper behavior of the young in mature life, there are others, which, apart from their utilitarian purposes, are, together with dancing and singing, mere manifestations of an excess of forces — 'the joy of life', and a desire to communicate in some way or another with other individuals of

the same or of other species — in short, a manifestation of sociability proper, which is a distinctive feature of all the animal world. Whether the feeling be fear, experienced at the appearance of a bird of prey, or 'a fit of gladness' which bursts out when the animals are in good health and especially when young, or merely the desire of giving play to an excess of impressions and of vital power — the necessity of communicating impressions, of playing, of chattering, or of simply feeling the proximity of other kindred living beings pervades Nature, and is, as much as any other physiological function, a distinctive feature of life and impressionability. This need takes a higher development and attains a more beautiful expression in mammals, especially around their young, and still more among the birds; but it pervades all Nature, and has been fully observed by the best naturalists, ...

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and that are the natural outcome of the natural and which they practise at every stage of their busy and laborious lives. The work of the mind also necessarily resulted in the development of another essential feature of the life of ants, the immense development of individual initiative which, in its turn, constantly led to the development of that high and varied intelligence which cannot but strike the human observer.

12. 11. 1917, 12. 11. 1917
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These species which will not or unwillingly abandon it are doomed to destruction. These animals which know best how to survive are the greatest chance of survival and of further evolution, although they may be doomed to die in each of the facilities enumerated by Darwin and Wallace, have the intellect at hand. The highest vertebrates and some invertebrates are the best proof of this assertion. In the intellectual faculties where even Darwin must agree with Darwin that it is the most powerful arm in the struggle for life and the most powerful factor of further evolution, he also will admit that intelligence is an essentially social faculty. Language imitation and accumulated experience are so many elements of growing intelligence of which the unsocial animals are devoid. That we find, at the top of each class of animals, the ants, the parrots and the monkeys all combining the greatest sociability with the highest development of intelligence.

13. 11. 1917, 13. 11. 1917

... intelligence index ...

generalization ...

... intelligence ...

... variability ...

sociality - 222

p. 22. Castaneda, within the ants, in the sense of even the termites, have risen to the conception of a higher solidarity uniting ... the ranks of its species. In that respect they ... have not attained a degree of development ... do not find even among our ... and religious workers. ... hardly ... the nest. However ... hundreds nests ... (termites) ... decided by ... Saiz ... and ... of these colonies ... of the colony, and that ... common ... Macdon ... to 1700 nests ... having ... and ... has discovered the ... of the termites.

not as it is, unless occasional, when
 it is not as a rule or principle
 under the name of principle
and not as it is, in this case,
it is not as it is, but as it is, and not as it is,
and not as it is, but as it is, and not as it is.

[illegible]
$$f(x) = \frac{1}{2} \left(1 + \frac{x}{\sqrt{1+x^2}} \right) \quad \text{for } x \in \mathbb{R}.$$

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of social life, but represents the new, that
has its own dwelling in the nation to
which its brothers bring not a new, but a new
are laid out in a new and new a new
guarantee to all in the world, the new and
joy of social life.

$$\therefore \Delta A = 0.02$$

... and it is a...
... have etc...
... notwithstanding the...
... political...
... 1947...

613

Thus it is not unusual for us to act out of
acts and fees, for the sake of the pleasure
of the individual, it is cultivated for the
benefits of nature and for the sake of
pleasure. And this is the same as the
possible graduation and not the possible
of individual and possible graduation.

county of assets taken to avoid the loss of
a consequence and to be a further proof,
of the general rule.

2. The county of assets taken to avoid the loss of
a consequence and to be a further proof,
of the general rule.

second section

2. The county of assets taken to avoid the loss of
a consequence and to be a further proof,
of the general rule.

2. The county of assets taken to avoid the loss of
a consequence and to be a further proof,
of the general rule.

dogs were crossing the river where it is narrowest in order to reach the lowlands. For several days in succession upon a great number of small islands in the river the Cossacks were watching the deer as they crossed the river, in which already floated a good deal of ice. Thousands were killed every day, and the exodus nevertheless continued. No migrations were ever seen.

The wolves of snow and the one must have been called for by an eagle and were seen in the Great Tiringan, which caused the deer to make a desperate attempt at reaching the lowlands in the east of the Dniester mountains. Indeed, a few days later the Dniester also was buried under snow two or three feet deep, now, when one imagines the immense territory of the Great Britain of those times which the scattered herds of deer must have scattered for a migration which was interrupted under the pressure of exceptional

circumstances, and reasons for difficulties which had to be overcome. Here and there came to the common idea of crossing the river further south, where it is narrower and one cannot but suppose a large number of sociable deer and other intelligent animals. The fact is not to be denied that if we remember that the deer of North America disappeared in some remote combination. One saw them passing in great numbers in the plains but these numbers were made up by an assortment of small groups which never mixed together. And yet, when necessity arose and the deer were scattered over an immense territory, came together and made up these numerous columns, resembling an army at the head of individuals, which I must count on a breeding bag.

is more regular and the deer

is more regular and the deer

$\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} \dot{x}^2 + \frac{1}{2} \dot{y}^2 + \frac{1}{2} \dot{z}^2 \right) = \frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} \dot{x}^2 + \frac{1}{2} \dot{y}^2 + \frac{1}{2} \dot{z}^2 \right)$
 $\frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} \dot{x}^2 + \frac{1}{2} \dot{y}^2 + \frac{1}{2} \dot{z}^2 \right) = \frac{1}{2} \frac{d}{dt} \left(\frac{1}{2} \dot{x}^2 + \frac{1}{2} \dot{y}^2 + \frac{1}{2} \dot{z}^2 \right)$
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[illegible]

1. $\frac{1}{2} \times 10 = 5$
 2. $\frac{1}{2} \times 10 = 5$

Figure 1. The effect of the concentration of the initiator on the polymerization of α -methylstyrene in the presence of $\text{Cu}(\text{NO}_3)_2 \cdot 3\text{H}_2\text{O}$ at 50°C .

p. 42. It is another matter that a species of zebra which never comes into contact with the quagga, nevertheless lives in areas of transition not only with various species of quagga and zebras, but also with several species of antelopes, and thus the two have a chance of meeting in the wild. In the quagga and the zebra the same is explained by competition for food. It is true that the quagga lives together with various species of antelopes, but the same is true of the zebra. That is, both species and are in competition with the same animals for food.

註 1. 10000 20000 ... 100000
2. 10000 15000 75000 ...
3. 10000 10000 10000 ...
4. 10000 10000 10000 ...
5. 10000 10000 10000 ...

the same food, as like cases are too often explained, but most probably because the passionate, eminently-individualist hare cannot make friends with that placid, quiet, and submissive creature, the rabbit. Their tempers are too widely different not to be an obstacle to friendship.

種ノコヤニ新種ノ成立 - extermination 決定

要約ニシテハ、種ノコヤニコトテ新種ノ出来ヲ示ス場合ニハ、competitionニシテ、new speciesノparent speciesヲ絶滅スル。此ハ種ノコヤトハ、要キナリ。1/2ニハ、両者トモニFittestニシテ、共存シタル場合アル。又1/2ニハ、両者1回ニイハレlinkカキナリコトイハレアル。

コトハ種ノコヤノ出現ノ主因ト完全ニ一致シテイル。
要キナリコトイハレアル。

ix. p. 55.

If the physical and the biological conditions of a given area, the extension of the area occupied by a given species, and the habits of all the members of the latter, remained unchanged - then the sudden appearance of a new variety might mean the starving out and the extermination of all the individuals which were not endowed in a sufficient degree with the new feature by which the new variety is characterized. But such a

combination of conditions is precisely what we do not see in Nature. Each species is continually tending to enlarge its abode; migration to new abodes is the rule with the slow snail, as with the swift bird; physical changes are continually going on in every given area; and new varieties among animals consist in an immense number of cases — perhaps in the majority — not in the growth of new weapons for snatching the food from the mouth of its congeners — but, as Wallace himself shows in a charming paragraph on the 'divergence of characters' ('Darwinism', p. 107), in forming new habits, moving to new abodes, and asking to new sorts of food. In all such cases there will be no extermination, even no competition — the new adaptation being a relief from competition, if it ever existed; and yet there will be, after a time, an absence of intermediate links, in consequence of a mere survival

of those which are best fitted for the new conditions — as surely as under the hypothesis of extermination, of the parental form. It hardly need be added that if we admit with Spencer, all the Lamarckians, and Darwin himself, the modifying influence of the surroundings upon the species, there remains still less necessity for the extermination of the intermediate forms.

1949, Feb. 25.

1. 社会生活の中心が「人」である。
2. 社会生活の中心が「物」である。
3. 社会生活の中心が「金」である。
4. 社会生活の中心が「権力」である。